



## Complete Summary

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### TITLE

Hypertension: percent of outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy where the regimen includes a thiazide diuretic.

### SOURCE(S)

Office of Quality Performance. FY 2009, Q2 technical manual for the VHA performance measurement system. Washington (DC): Veterans Health Administration; 2009 Jan 5. various p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the percentage of outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy where the regimen includes a thiazide diuretic.

### RATIONALE

National hypertension management guidelines, such as the U.S. National Heart, Lung and Blood Institute's Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) and the 2004 Veterans Administration/Department of Defense (VA/DoD) Hypertension Clinical Practice Guidelines, recommend thiazide-type diuretic use for most patients with uncomplicated hypertension in accordance with the results of decades of hypertension cardiovascular morbidity trials, including the ALLHAT

study (The Antihypertensive and Lipid Lowering Treatment to Prevent Heart Attack Trial). However, review of published pharmacy utilization data both in VA and in the private sector strongly suggests that hypertension guidelines are not followed for most patients. In particular, thiazide-type diuretic use remains low.

## **PRIMARY CLINICAL COMPONENT**

Hypertension; antihypertensive multi-drug therapy; thiazide

## **DENOMINATOR DESCRIPTION**

Number of unique outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Number of unique outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy with an active prescription for a thiazide diuretic (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A systematic review of the clinical literature
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Overall poor quality for the performance measured

### **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Psaty BM, Lumley T, Furberg CD, Schellenbaum G, Pahor M, Alderman MH, Weiss NS. Health outcomes associated with various antihypertensive therapies used as first-line agents: a network meta-analysis. JAMA2003 May 21;289(19):2534-44. [95 references] [PubMed](#)

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

#### **CURRENT USE**

External oversight/Veterans Health Administration  
Internal quality improvement

### **Application of Measure in its Current Use**

#### **CARE SETTING**

Ambulatory Care  
Physician Group Practices/Clinics

#### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Advanced Practice Nurses  
Physicians

#### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Single Health Care Delivery Organizations

#### **TARGET POPULATION AGE**

Unspecified

#### **TARGET POPULATION GENDER**

Either male or female

#### **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

### **Characteristics of the Primary Clinical Component**

#### **INCIDENCE/PREVALENCE**

Unspecified

#### **ASSOCIATION WITH VULNERABLE POPULATIONS**

Unspecified

#### **BURDEN OF ILLNESS**

Unspecified

## UTILIZATION

Unspecified

## COSTS

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

## IOM CARE NEED

Living with Illness

## IOM DOMAIN

Effectiveness

## Data Collection for the Measure

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Number of unique outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy

## DENOMINATOR SAMPLING FRAME

Patients associated with provider

## DENOMINATOR INCLUSIONS/EXCLUSIONS

### Inclusions

Number of unique outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy\*

### \*Note:

- *Patients with a diagnosis of hypertension:* Two International Classification of Disease, Ninth Revision (ICD-9) diagnoses of hypertension in the outpatient setting *at the same facility* in the previous twenty-four months prior to the end date of the rolling three month period being evaluated. The ICD-9 codes for hypertension are: 401.1 or 401.9 in any position. If patients have two or more diagnoses of hypertension in the past twenty-four months at more than one facility, the *most recent facility* where two outpatient diagnoses of

hypertension occurred will be assigned the unique patient for this measurement purpose.

- *Uncomplicated hypertension patients:* Patients with a diagnosis of hypertension without any absolute exclusion AND without compelling indication for other medication.
- *Patients receiving antihypertensive multi-drug therapy:* An active prescription at any facility for two or more drugs from any of the drugs in Table A of the original measure documentation including any fixed dose combination product with the exception of the potassium sparing combinations.

Refer to the original measure documentation for a listing of drug names used to define antihypertensive multi-drug therapy and for additional details.

## Exclusions

### Absolute Exclusions:

- Patients with an active prescription (the definition of active Veteran Administration [VA] prescription is applied to the search for Lithium products) for any of the Lithium products including:
  - LITHIUM CARBONATE CAP
  - LITHIUM CARBONATE TAB
  - LITHIUM CARBONATE TAB SA
  - LITHIUM CITRATE SYRUP
- Patients with an outpatient or inpatient diagnosis at any facility within the past 24 months prior to the end date of the rolling 3-month period being evaluated as follows:
  - Systolic Dysfunction as defined by any ICD-9 code of 428.0 or 428.1 or 428.9 or 398.91 or 428.2x or 428.4x
  - Cor Pulmonale as defined by any ICD-9 code of 415.0 or 416.9
  - Hyponatremia as defined by any ICD-9-CM code of 276.1
  - Hyperaldosteronism as defined by any ICD-9-CM code of 255.1 or 255.1x
  - Stage IV, Stage V, or End Stage Renal Disease as defined by any ICD-9 code of 585.4, 585.5, 585.6
  - Spinal Cord Injury (SCI)
- Patients with a lab result at any facility within the past 24 months prior to the end date of the rolling 3-month period being evaluated as follows:
  - Patients in whom the most recent estimated Glomerular Filtration Rate (eGFR) is less than 30 cc/min, as calculated by the MDRD four variable formula (estimated GFR in cc/min per 1.73 m<sup>2</sup>):  
<http://www.hdcn.com/calcf/gfr.htm>.  
Estimated GFR (ml/min/1.73m<sup>2</sup>): = 186 x (Scr) - 1.154 x (Age)-0.203 x (0.742 if female) x (1.210 if African - American)
  - Patient in whom the most recent outpatient eGFR performed at any facility and reported through VistA lab package is less than 30 cc/min
  - Patients in whom the most recent creatinine performed at any facility is greater than or equal to 2.0

Refer to the original measure documentation for additional exclusions due to compelling indication for another agent.

## RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

### **DENOMINATOR (INDEX) EVENT**

Clinical Condition  
Therapeutic Intervention

### **DENOMINATOR TIME WINDOW**

Time window precedes index event

### **NUMERATOR INCLUSIONS/EXCLUSIONS**

#### **Inclusions**

Number of unique outpatients with a diagnosis of hypertension (uncomplicated) on antihypertensive multi-drug therapy with an active prescription for a thiazide diuretic\*

#### **\*Note:**

- *"Active" Veteran Administration (VA) prescription:* In order for the drug to be considered active, it must have at least one fill/refill at any facility with at least one day's supply during the rolling 3-month review period of evaluation.
- *Active Non-VA drug prescription:* In order for the Non-VA drug to be considered active, it must have at least one day activity during the rolling 3-month review period of evaluation.
- *Regimen:* Includes an active VA or Non-VA prescription for a thiazide diuretic. The drugs or fixed dose combinations found in Table B of the original measure documentation are considered thiazide diuretics or like acting drugs and will be considered as in the thiazide drug class. An active prescription for thiazide can be *from any facility*.

Refer to the original measure documentation for additional details.

#### **Exclusions**

Unspecified

### **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

### **NUMERATOR TIME WINDOW**

Fixed time period

### **DATA SOURCE**

Administrative data  
Pharmacy data

#### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

#### **PRE-EXISTING INSTRUMENT USED**

Unspecified

### **Computation of the Measure**

#### **SCORING**

Rate

#### **INTERPRETATION OF SCORE**

Better quality is associated with a higher score

#### **ALLOWANCE FOR PATIENT FACTORS**

Unspecified

#### **STANDARD OF COMPARISON**

Internal time comparison

### **Evaluation of Measure Properties**

#### **EXTENT OF MEASURE TESTING**

Unspecified

### **Identifying Information**

#### **ORIGINAL TITLE**

Thiazide diuretic use in uncomplicated HTN, multi-therapy.

#### **MEASURE COLLECTION**

[Fiscal Year \(FY\) 2009: Veterans Health Administration \(VHA\) Performance Measurement System](#)

#### **MEASURE SET NAME**

[Performance Measures](#)

**MEASURE SUBSET NAME**

[Hypertension](#)

**DEVELOPER**

Veterans Health Administration

**FUNDING SOURCE(S)**

Unspecified

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

Unspecified

**FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

Unspecified

**ADAPTATION**

Measure was not adapted from another source

**RELEASE DATE**

2006 Oct

**REVISION DATE**

2009 Jan

**MEASURE STATUS**

This is the current release of the measure.

This measure updates a previous version: Office of Quality and Performance (10Q). FY 2008, Q1 technical manual for the VHA performance measurement system. Washington (DC): Washington (DC); 2007 Oct 31. 315 p.

**SOURCE(S)**

Office of Quality Performance. FY 2009, Q2 technical manual for the VHA performance measurement system. Washington (DC): Veterans Health Administration; 2009 Jan 5. various p.

**MEASURE AVAILABILITY**



The individual measure, "Thiazide Diuretic Use in Uncomplicated HTN, Multi-Therapy," is published in "FY 2009, Q2 Technical Manual for the VHA Performance Measurement System."

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## **NQMC STATUS**

This NQMC summary was completed by ECRI Institute on March 7, 2008. The information was not verified by the measure developer. This NQMC summary was updated by ECRI Institute on December 11, 2009. The information was verified by the measure developer on March 22, 2010.

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